

***FlyBy Math™* Alignment**
2007 Mississippi Mathematics Framework

Content Strand: Algebra

Competency 2. Understand, represent, and analyze patterns, relations, and functions.

Objectives/Benchmarks	<i>FlyBy Math™</i> Activities
d. Explain and illustrate how changes in one variable may result in a change in another variable and apply to concepts of independent and dependent variables.	<p>--Represent distance, speed, and time relationships for constant speed cases using tables, bar graphs, line graphs, equations, and a Cartesian coordinate system.</p> <p>--Interpret the slope of a line in the context of a distance-rate-time problem.</p> <p>--Use graphs to compare airspace scenarios for both the same and different starting conditions and the same and different constant (fixed) rates.</p>
f. Use algebraic and graphical methods to solve systems of linear equations and inequalities in mathematical and real-world situations (i.e. graphing, elimination, substitution).	<p>--Apply mathematics to solving distance, rate, and time problems for aircraft conflict scenarios.</p> <p>--Represent distance, speed, and time relationships for constant speed cases using linear equations and a Cartesian coordinate system.</p> <p>--Use graphs to compare airspace scenarios for both the same and different starting conditions and the same and different constant (fixed) rates.</p>

Content Strand: Geometry

Competency 3. Understand how algebra and geometry interconnect and build on one another.

Objectives/Benchmarks	<i>FlyBy Math™</i> Activities
b. Use algebraic and geometric representations to compare slopes as rates of change.	<p>--Represent distance, speed, and time relationships for constant speed cases using linear equations and a Cartesian coordinate system.</p> <p>--Use graphs to compare airspace scenarios for both the same and different starting conditions and the same and different constant (fixed) rates.</p> <p>--Interpret the slope of a line in the context of a distance-rate-time problem.</p>

Content Strand: Measurement

Competency 4. Demonstrate and apply various formulas in problem solving situations.

Objectives/Benchmarks

a. Solve real-world problems involving formulas (e.g., circumference, perimeter, area, volume, interest, distance, rate, work, etc.).

***FlyBy Math™* Activities**

--Use the distance-rate-time formula to predict and analyze aircraft conflicts.

Content Strand: Data Analysis and Probability

Competency 5. Represent, analyze and make inferences based on data with and without the use of technology.

Objectives/Benchmarks

a. Collect, organize, graph, and interpret data sets.

***FlyBy Math™* Activities**

--Represent distance, rate, and time data using tables, line plots, bar graphs, and line graphs.

--Use tables, bar graphs, line graphs, a Cartesian coordinate system, and equations to model aircraft conflicts and predict outcomes.

d. Analyze data and apply appropriate scale to the graph of the data.

--Use tables, bar graphs, line graphs, a Cartesian coordinate system, and equations to model aircraft conflicts and predict outcomes.